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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,901	08/22/2003	Yoshihiro Tsuchiya	104595.01	8549
25944	7590	01/09/2006	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			CHEN, TIANJIE	
			ART UNIT	PAPER NUMBER
			2656	

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/645,901	Applicant(s) TSUCHIYA ET AL.	
	Examiner Tianjie Chen	Art Unit 2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/19/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 1-6, 8-14, 16-22, 24 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7, 15, 23 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/425,967.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

2nd Non-Final Rejection

1. Applicant's response filed on 10/19/2005 is acknowledged. Applicant asserts: "Independent claims 1, 9, 14, 17, 22, 24, and 26 define patentable subject matter." Examiner disagrees with the assertion. Examiner has in no place in the Non-Final Rejection mailed in 07/27/2005 pointed out any patentable subject matter. However, there is a typo in Office Action Summary, wherein the withdrawn claims 1-6, 8-14, 16-22, 24, and 26 were erroneously recited as allowed claims. The following rejection is mailed for correcting the typo in the Office Action Summary mailed on 07/27/2005.

Election/Restrictions

2. Applicant's election with traverse of Species IV claims 7, 15, 23, and 25 in the reply filed on 07/08/2005 is acknowledged. Representative has also confirmed that Applicant only elected claims 7, 15, 23, and 25 on the telephone interview conducted on 07/19/2005. The traversal is on the ground(s) that the search and examination of the entire application could be made without serious burden. This is not found persuasive because the five species have essentially different structures, which requires extra search, which adds serious burden.

The requirement is still deemed proper and is therefore made FINAL.

Specification

3. The disclosure is objected to because of the following informalities:
- The first paragraph in specification should be changed to: "This Application is a Divisional of U.S. Application No. 09/425,967 filed on October 25, 1999, now

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US patent No. 6,661,623, the contents of which are incorporated herein in its entirety.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 7, 15, 23, and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Mao et al (US 6,134,090).

Claims 7, 15, 23, and 25; Mao et al shows a thin film magnetic head having magnetic transducer in Figs. 2 and 5 including: a nonmagnetic layer 214 (Column 4, line 5) having a pair of facing surfaces; a soft magnetic layer 216 (Column 4, line 8) formed on one surface of the nonmagnetic layer; a ferromagnetic layer 212 (Column 4, line 7) formed on the other surfaces of the nonmagnetic layer; an antiferromagnetic layer 210 (Column 3, line 62) formed on the ferromagnetic layer on the side opposite to the nonmagnetic layer; and a ferromagnetic interlayer 242 formed in the ferromagnetic layer; the ferromagnetic interlayer 242 is made of NiFe (Column 4, line 37-38), which has magnetism, and the electrical resistance of the ferromagnetic interlayer is always higher than the electrical resistance of the ferromagnetic layer since the ferromagnetic

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layer contains three parallel electrically connected layers, the electric resistance of the each compound is always less than the electric resistance of parallel connected combination; wherein the thickness of the ferromagnetic layer is $T_k = 20 \text{ \AA} + 30 \text{ \AA} + 30 \text{ \AA} = 80 \text{ \AA}$ (Column 4, lines 23-45) and the distance between the nonmagnetic layer and the ferromagnetic interlayer is $D_2 = 20 \text{ \AA}$; it leads to $0.2T_k < D_2 < 0.8T_k$ and D_2 is between 0.6 nm to 3.6 nm.

Conclusion

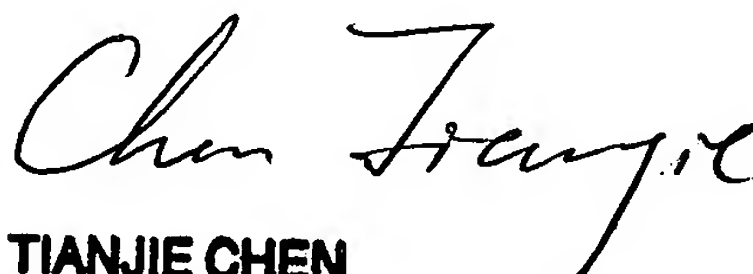
5. The prior art made of record in PTO-892 Form and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is 571-272-7570. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


TIANJIE CHEN
PRIMARY EXAMINER